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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/780,846
Filing Date: February 18, 2004
Appellant(s): BROERING ET AL.

David K. Mattheis
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 17, 2009 appealing from the Office action mailed September 19, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

(A) Listing of Evidence Relied Upon

1,301,198	Bustin (UK)	12-1972
6,394,652	Meyer et al	5-2002

5,024,642	Buchman et al	6-1991
6,635,139	Bohn et al	10-2003
5,709,069	Cronauer	1-1998
2,615,375	Rowe et al	10-1952
4,481,006	LaFleur et al	11-1984
5,956,929	Yisha et al	9-1999
6,446,684	Hiramoto et al	9-2002
5,845,463	Henaux	12-1998
5,564,252	Adelmann	10-1996
5,279,095	Muller	1-1994

(**B) Brief Description of Evidence Relied Upon**

(B) Brief Description of Evidence Relied Upon

Bustin taught that it was known to convert a tube film into a bag assembly which included the steps of introducing a tubular sheet material having overlapped portions into a nip between embossing rolls which formed the overlapped portions of sheet material into a strainable network having first and second regions where the first regions are undeformed and the second regions are formed into disengageable pleat elements and disengaging the pleat elements with a disengaging means which included introduction of air between the overlapped portions.

Cronauer suggested that those skilled in the art of bag manufacture in a plastic bag converting operation would have known that an air knife would have been a

suitable means useful for introduction of air between overlapped plastic layers in order to facilitate separation of the layers (disengaging the same).

Either one of **Buchman et al** or **Bohn et al** suggested that in a converting operation for making a plastic bag it was commonplace to start with an extruded flat tube and sever the end of the same in order to provide a c-shaped over folded plastic web useful in the converting operation to make the plastic bag therefrom.

Rowe et al suggested in the art of making a bag assembly that suitable means for disengaging an overlapped bag material having pleats therein via a variety of means including a static bar opening or a dynamic bar opening.

LaFleur et al suggested in the art of making a bag assembly that suitable means for disengaging an overlapped bag material having pleats therein via a dynamic bar opening.

Yisha et al suggested that it was known in the art of bag manufacture/converting to open the bag with a stationary bar assembly.

Each one of **Hiramoto et al**, **Henaux**, **Adelmann** and **Muller** suggested that it was known to open up an overlapped plastic assembly in a plastic bag converting operation using a vacuum/suction system.

Meyer et al suggested that in making a plastic bag it was well known at the time the invention was made to overlap portions of a sheet material and pass the same though a process whereby the overlapped portion of sheet material was formed into a strainable network including a plurality of regions which were undeformed and a plurality

of second regions formed into pleat elements wherein the sheet material was provided with an elastic-like behavior suitable for flexible bag manufacture.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3, 12-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bustin in view of Meyer et al and optionally further taken with either one of Buchman et al or Bohn et al.

Bustin teaches a method of making an article (flexible bag) having elastic-like behavior by introducing a sheet material 10 having at least one overlapped portion (it should be noted that the overlapped portion was formed by the flattening of the extruded tube sheet and thus the opposed sides of the tube sheet were brought into overlapping contact), forming said overlapped portion of sheet material into a strainable network including a plurality of first regions and a plurality of second regions, said first regions being substantially un-deformed and said second regions being formed into disengageable pleat elements (sheet passes between embossing rollers 25, 26 to form deformations/pleats), and disengaging said pleat elements using a disengaging means (introduces air between overlapped portion of sheet to disengage pleat elements). See Figures 1-6, p. 1 lines 11-18, p. 2 lines 5-15 and 115-117, p. 3 lines 10-40. It should be noted that an article of the present invention has elastic-like behavior because of the presence of the strainable network (see present specification at section [0022] on p. 11). The strainable network, which comprises a plurality of deformations formed in the plastic sheet material (i.e. polyethylene), is formed by feeding the sheet material

through a nip formed by a toothed roll and an opposing grooved roll (see present specification at sections [0019-0020]). Furthermore, the present specification incorporates commonly owned US PAT 6,394,652 by reference for it's teaching of a sheet material having a strainable network that can be used with the present invention (see present specification at section [0024]) - it being noted that the '652 PAT forms the deformations of the strainable network by passing the sheet material through a nip formed by embossing rolls (see '652 PAT at column 2, lines 39-43 and column 3, lines 50-56 and column 4, lines 57-59). Bustin forms a plurality of deformations in his plastic sheet material (i.e. polyethylene) by passing the same through a nip formed by a toothed embossing roll and an opposing grooved roll (p. 4, lines 25-31), one would readily appreciate that the deformations of Bustin form a 'strainable network' in the sheet material and that this strainable network would impart 'elastic-like behavior' to the article. It should be noted that the reference failed to teach that one skilled in the art would have fed a c-shaped material though the converting operation but instead employed a tubular member in the operation. It should be noted that the claims as presented do not require that the sheet material be in the form of a c-shaped material prior to the embossing step.

Meyer teaches a method of making an article (flexible bag) having elastic-like behavior (column 2, lines 49-55; column 3, lines 50-56) by introducing a sheet material (i.e. polyethylene; column 11, line 2) having at least one overlapped portion (column 2, lines 16-29; column 9, lines 6-9) and forming said overlapped portion of sheet material into a strainable network including a plurality of first regions 50 and a plurality of second

regions 40, said first regions being substantially un-deformed and said second regions being formed into pleat elements (Figure 1; column 2, lines 39-43; column 3, lines 50-56). Meyer taught that one skilled in the art would have understood that the material used to form the bags would have been a known alternative which was either a tubular film which was flattened or a folded sheet material which was sealed, see Meyer et al at column 2, lines 16-31. The appellant is advised that the use of a sheet material which was c-folded was an art recognized equivalent to the use of a flattened tubular sheet in the manufacture of bags wherein the bags had a strainable network provided therein. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a c-folded sheet material in place of an extruded tube in the manufacturing operation to make bag in accordance with the techniques of Bustin as the reference to Meyer et al expressly suggested that such were art recognized equivalents in the art of bag manufacture with strainable networks therein.

Since Meyer forms his strainable network of un-deformed regions and pleat elements by passing the sheet between embossing rollers while the sheet is folded/overlapped (column 4, lines 57-65; column 2, lines 17-29; column 9, lines 6-9), one would readily appreciate that one layer will engage with the other layer in the areas where the pleat elements are formed (see section [0003] of Admitted Prior Art in present specification). If it is not taken that Bustin teaches the pleat elements forming a strainable network and the flexible bag having elastic-like behavior, it would have been obvious to one of ordinary skill in the art to carry out the embossing of Bustin such that the un-deformed regions and disengageable pleat elements form a strainable network

that imparts elastic-like behavior to the flexible bag because such is known in the art, as taught by Meyer, where elastic-like behavior allows the bag to expand in response to forces exerted by contents within the bag to provide an increase in volume so that the bag can accommodate the contents placed therein (Meyer; column 1, lines 48-50; column 3, lines 50-55; column 3, lines 50-56). Note that the embossing performed by Meyer clearly formed the strained film which was capable of being elastic-like which made it more suitable as a film material for a bag.

Regarding claim 3, Meyer teaches this (column 2, lines 16-30; column 9, lines 5-9). Regarding claim 12, Meyer teaches this (Figure 3). Regarding claim 13, Meyer teaches this (column 11, lines 28-38). Regarding claim 14, Meyer in view of Bustin teaches this (Bustin at p. 3, lines 12-130). Regarding claim 15, Meyer in view of Bustin teaches this (Bustin at p. 3, lines 10-13). Regarding claim 16, Meyer teaches this. Regarding claim 18, Meyer in view of Bustin teaches this (Bustin at p. 3, lines 35-38 and 125-126). Regarding claim 19, it would have been obvious to interleave the bags of Meyer because such is well known and conventional in the flexible bag art when storing/shipping the bags.

To further evidence that those skilled in the art would have understood that a flattened tube or a c-folded sheet material would have been art recognized equivalents in the art of bag manufacture, the references to Bohn et al or Bachman et al are cited. More specifically, the appellant is referred to column 4, lines 8-16 of Bachman et al and column 3, lines 1-19 of Bohn et al. Note that both Bohn et al and Bachman et al are forming bags from the plastic material supplied in the form of a flattened tube or a c-

folded sheet material. In each of Bohn et al or Bachman et al the c-shaped folded sheet material was provided from an extruded flat tube with a side portion severed off. One clearly would have understood for converting operations that such a c-folded material was desirable and would have additionally understood how to obtain the same more efficiently in the converting operation by slitting the edge of the tube in Bustin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a c-folded sheet material as an alternative to the tubular sheet material in Bustin as the references to Meyer et al suggested as further supported by the teachings of either one of Bohn et al or Bachman et al in order to form a bag having a strainable network therein.

While the dynamics of a c-folded engaged sheet may have been different from that of a tubular sheet which has been engaged, one skilled in the art would have been expected to process the material in a similar manner in order to separate the engaged material in accordance with the teachings of Bustin and regulated the air flow (for example) in order to ensure separation of the material. One would have reasonably expected success in performing this processing on en engaged film whether in c-folded or tubular shape. The artisan in such a bag converting operation would have understood the need for example of retaining the edge of the c-folded material where it was slit in order to enable airflow within the c-folded material (retaining the slit edge would have in effect resulted in provision of a tubular member where the pleats would have been disengaged employing the air blowing technique of Bustin for example). While appellant argues that there is no reasonable expectation of success, the appellant draws this

conclusion without any evidence to support the same other than to state that the dynamics of the material is different. Because those skilled in the art of converting plastic sheeting into bags is well versed in various mechanical expedients useful for the manufacture, one would have reasonably expected to have understood how to process the sheet material to disengage the same whether in the form of a tube or a c-folded sheet material.

Claims 2, 4, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bustin in view of Meyer et al and optionally further in view of either one of Bohn et al or Bachman et al for the reasons as discussed above with regard to claim 1 further in view of Cronauer.

Appellant is referred to the complete discussion of Bustin, Meyer et al , and either one of Bohn et al or Bachman et al above for the discussion of the complete teachings found in the references. Regarding claim 2, Bustin teaches disengaging the pleat elements by inflation (p. 3 lines 30- 33) but it is unclear as to how Bustin introduces the air between the pleats. Note that one would have employed a disengaging means in Meyer et al in light of the teachings of Bustin. It would have been obvious to use an air knife to introduce the air because such is used in the art to deliver air, which separates the front and back walls of a flexible bag to thereby open the same, as by Cronauer (column 1, lines 14-15; column 2, lines 54-57; column 5, lines 6-9). Use of a conventional means in the art to introduce air would have been perceived by those skilled in the art as useful means to introduce air in the processing in accordance with Bustin.

Regarding claim 4, Bustin teaches such.

Regarding claim 10, Bustin teaches forming the pleats using embossing rollers 25, 26 (p. 3 lines 71-93).

Regarding claim 20, all the limitations were addressed with respect to claims 1 and 2.

Claims 2, 4-9, 10, 11, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bustin in view of Meyer et al and optionally further in view of either one of Bohn et al or Bachman et al as applied to claim 1 above further in view of any one of Rowe et al, LaFleur et al or Yisha et al or in view of the collective teachings of Hiramoto et al, Henaux, Adelmann, and Muller.

Regarding claims 2, 5-9 and 11, one or ordinary skill in the art reading Bustin as a whole would have readily appreciated that the reference is not concerned with a particular method/device for disengaging the pleats. The reference clearly desired that the pleats be disengaged but the specific mechanism used to do the same was of no import to Bustin. Therefore, it would have been obvious to one of ordinary skill in the art to use other methods/devices, such as those being claimed by Appellant, as an alternative to inflation since such alternatives are well known in the flexible bag art and only the expected results would have been achieved: Rowe teaches making flexible bag where pleats formed in bag and then pleats separated by variety of methods/devices including inflation (Figure 1; column 3, lines 35-36), a static opening bar (Figure 5; column 4, lines 30-34), and a dynamic opening bar (Figures 9-13 and 16; column 4, lines 60-75; column 5, lines 43-47 and 55-67); LaFleur teaches opening a flexible bag

using a dynamic opening bar (Figure 1; column 1, lines 4-12; column 2, line 48 – column 3, line 3); Yisha teaches opening a flexible bag using a stationary opening bar (Figures 1-2; abstract; column 2, lines 48-65); collective teachings of Hiramoto (column 1, lines 8-15; column 3, lines 39-43), Henaux (Figure 1; column 2, lines 22-24), Adelmann (column 5, lines 50-65) and Muller (abstract; column 1, lines 14-16; column 2, lines 6-40; column 3, lines 38-42) teach opening a flexible bag using suction/vacuum. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an alternative means to air inflation to facilitate the separation (disengaging) of the plastic film material in the plastic bag converting process of Bustin such as the use of dynamic or static bars or vacuum/ suction mechanisms as such were art recognized equivalents in such converting operations as evidenced by any one of Rowe et al, LaFleur et al or Yisha et al or the collective teachings of Hiramoto et al, Henaux, Adelmann, and Muller.

Regarding claim 17, Bustin teaches sealing at least one edge of the flexible bag (p. 3 lines 35-36). It would have been obvious to sever the sheet material across a width of the sealed edge to separate the sheet material into individual flexible bags because such is known in the art, as taught by Yisha (column 4, lines 34-40; column 5, lines 40-45).

Regarding claim 19, it would have been obvious to interleave the severed (claim 17) or perforated (claim 18) bags of Bustin because such is well known and conventional in the flexible bag art when storing/shipping the bags.

Regarding claims 4, 10 and 20, please see the discussions above.

(10) Response to Argument

The appellant argues regarding the prima facie case that one skilled in the art would not have found the use of an overfolded sheet material in the form of a c-folded sheet or a flattened tubular member in the alternative in the manufacturing and converting processing defined by Bustin as the reference only suggested that one practice the invention described therein with a flattened tube and the dynamics of separating a tube of material which completely encloses local areas and that of handling a c-folded sheet material are totally different. While the dynamics of separating a tube of material and separating a folded over sheet of material may be different, there is no reason to believe that one skilled in the art would not have been motivated to process either an overfolded sheet of material in the form of a c-fold or a flattened tube (which had an overlapped portion onto itself) in the manner claimed followed by a disengaging step. Thus there appears to be ample motivation to perform the claimed invention. It should be noted that while appellant repeatedly argues that the flattened tube or the c-folded sheet are different in terms of dynamics that: (1) there is no special disengaging means defined in the claims other than disengaging the material and thus if in fact it does require some special means to disengage the c-folded material there is no specific, special means recited in the claims (either in claim 1 or claim 20), and; (2) the claims as presented do NOT include a folding step and do NOT make an distinction as to when the material is in the c-folded condition (thus one viewing the claim would understand that practicing the straining process with the embossing rollers could take place on the tubular structure followed by severing an edge of the same for converting

and still satisfy the claim, note herein the claims as presented would have additionally been obvious wherein one started with the c-folded sheet material and embossed this overlapped material and followed this with a disengaging step).

In fact, in bag manufacture (which the reference to Bustin is concerned with), one would have known to manufacture the bag from either an overfolded sheet of plastic sealable material or a tube which was flattened to provide an overlapping region therein (that these were alternative supplied of the material for the processing which must later transpire to make a bag from the material supply). Appellant is referred to Meyer as well as either one of Bohn et al or Bachman et al. The artisan would have been expected to emboss the sheet material in either form (as the reference to Meyer suggested) which imparted the claimed strain upon the material. The reference to Bustin clearly teaches disengaging the material subsequent to the inducing of the strain therein when processing a flattened tube of the material. One would have been expected to process the overfolded (c-folded) sheet material in a like manner and thus, processing to disengage the pleat elements would have been performed. One skilled in the art of converting plastic sheet material into bags is of a skill level high enough to readily appreciate how such would have been performed. One possible way to perform such disengaging would have been to retain the severed edge of the cut tube to allow for air to flow therein and blow air inside what in effect was a tube to disengage the material. The fact that the dynamics of the material differ does not render the claimed invention unobvious. In fact, one would have reasonably been expected to disengage the pleat elements and additionally would have been expected to understand how to

perform such a disengaging step with reasonable success. It should be noted that those skilled in the art are presumed to have the skill level to modify the disengaging means provided by Bustin to act upon the c-folded sheet materials as those skilled in the art would recognize that other modifications were needed to accommodate the modification and that the phosita (person of ordinary skill in the art) would have been expected to have sufficient basic knowledge to construct such means, In re Bode et al, 193 USPQ 12. The question to be answered here is would one have reasonably been expected to provide for disengaging the c-folded material in a like manner to the disengaging of the flattened tube subsequent to the straining operation and if so would one have had the skill level to understand how to modify if necessary the disengaging means of Bustin to accommodate the c-folded sheet. One clearly would have desired to disengage the c-folded sheet in light of the prior art and there is simply no reason to believe (even if the dynamics of the material are different) that one skilled in the art would not have known how to disengage the c-folded sheet and make any necessary modifications to the disengaging means of Bustin to act upon the c-folded sheet material. Appellant is advised that obviousness is not based upon absolute predictability but rather upon whether or not there is a reasonable expectation of success when making the identified modifications, see In re O'Farrell, 7 USPQ 2nd 1673. Here one reasonably would have expected success when using a c-folded sheet material for the flattened tube and one would have understood that either was suitable as a starting stock material for manufacture of a bag in light of the prior art of record.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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